Product ID:FREON 12 FLUOROCARBON MSDS Date:09/23/1991 FSC:6830 NIIN:00-264-5913 **MSDS Number: BDQLJ** === Responsible Party === Company Name: E. I. DUPONT DE NEMOURS AND COMPANY Address: FREON PRODUCTS DIVISION City:WILMINGTON State:DE ZIP:19898 Info Phone Num:800-441-3637 **Emergency Phone** Num:800-441-3637/800-424-9300(CHEMTREC) CAGE:73925 === Contractor Identification === Company Name: DDRV STOCK MAINTENANCE DIV/DDRV-H Address:8000 JEFFERSON-DAVIS HIGHWAY Box:City:RICHMOND State:VA ZIP:23297 Country:US Phone:804-279-3125 CAGE:02LX8 Company Name: DU PONT E I DE NEMOURS AND CO INC PETROCHEMICALS DEPT Address:1251 BRANDYWINE BLDG Box:City:WILMINGTON State:DE ZIP:19898 Phone:302-773-5676 CAGE:73925

Ingred Name:D

ICHLORODIFLUOROMETHANE (SARA III) CAS:75-71-8 RTECS #:PA8200000 Fraction by Wt: 100% OSHA PEL:1000 PPM ACGIH TLV:1000 PPM; 9192 EPA Rpt Qty:5000 LBS DOT Rpt Qty:5000 LBS **Ozone Depleting Chemical:1** LD50 LC50 Mixture: TLV IS 1000 PPM, 4950 MG/M3. Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: ACUTE-INHALE: MAY CAUSE TINGLING SENSAT ION, HUMMING IN THE AIR, SLURRED SPEECH, AMNESIA, IRREGULAR HEART BEAT, UNCONSCIOUSNESS OR DEATH. MISUSE CAN BE FATAL.EYE:TEARING, IRRITATION.SKIN:LIQUID MAY CAUSE FROST BITE.ORAL:LIQUID MAY CAUSE NECROSIS OF LIPS & TONGS, BLANCHING OF SKIN, PAIN & TENDERNESS. CHRONIC-MAY CAUSE CNS EFFECTS. Effects of Overexposure: INHALATION MAY CAUSE TINGLING SENSATION, HUMMING IN THE AIR, SLURRED SPEECH, AMNESIA, IRREGULAR HEART BEAT, UNCONSCIOUSNESS OR DEATH. MISUSE CAN BE FATAL. EYE IRRITATION & BLURRED VISION. SKIN EXPOSUR E TO LIQUID MAY CAUSE FROSTBITE. ORALLYLIQUID MAY CAUSE NECROSIS OF LIPS & TONGS, BLANCHING OF SKIN, PAIN & TENDERNESS. Medical Cond Aggravated by Exposure: INDIVIDUALS WITH PRE-EXISTING DISEASES OF THE CENTRAL NERVOUS OR CARDIOVASCULAR SYSTEM MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE EXPOSURES. First Aid:GET MEDICAL ATTENTION IN ALL CASES. EYE:FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. SKIN: FLUSH WITH WATER. TREAT FOR FROSTBITE IF NECESSARY. INHALED: REMOVE TO FRESH AIR & PROVIDE OXYGEN/CPR IF NEEDED. ORAL: INGESTION IS NOT CONSIDERED A POTENTIAL ROUTE OF EXPOSURE.

Flash Point:WILL NOT BURN

Extinguishing Media:WATER, CO2, FOAM OR DRY CHEMICAL. WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL & FLUSH SPILLS AWAY. Fire Fighting Procedures

:WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE MODE. Unusual Fire/Explosion Hazard: MAY FORM HYDROGEN FLUORIDE, HYDROGEN CHLORIDE AND TRACES OF CARBONYL HALIDES. CYLINDERS MAY BE RUPTURED UNDER FIRE CONDITIONS. Spill Release Procedures: KEEP UPWIND. VENTILATE ENCLOSED SPACES UNTIL GAS IS DISPERSSED. DO NOT SMOKE OR OPE RATE INTERNAL COMBUSTION ENGINES IN IMMEDIATE VICINITY. Handling and Storage Precautions: STORAGE-STORE IN COOL, DRY PLACE. CYLINDERS ARE UNDER PRESSURE. KEEP AWAY HEAT & INCOMPATIBLE MATERIALS. Other Precautions: AVOID BREATHING VAPORS, AVOID EYE OR SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING OR DRINKING. USE WITH ADEQUATE VENTILATION. NEVER USE IN CONFINED OR CLOSED SPACE ====== Exposure C ontrols/Personal Protection ========= Respiratory Protection: WEAR NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS OPERATED IN POSITIVE PRESSURE MODE OR SUPPLIED-AIR RESPIRATOR WITH FULL FACEPIECE AND OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE . Ventilation:LOCAL EXHAUST/MECHANICAL Protective Gloves: CLOTH-LINED RUBBER GLOVES Eve Protection: SAFETY GOGGLES/FACE SHIELD Other Protective Equipment: EYEBATH, SAFETY SHOWER, PROTECTIVE CLOTHING Work Hygienic Practices: **OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND** RECOMMENDED PROCEDURES. WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING. Supplemental Safety and Health VP=4893MM HG(80PSIG).NOTE:EXPSRE TO HIGH VAP.LEVELS MAY CAUSE CARDIAC ARRYTH-VAP.MAY COLLECT IN LOW PLACES-NON-FLAMM, FREON 12-DECOMP.SLOWLY W.WTR-TYPE 12 OF FED SPEC BB-F-1421/MSDS DATED **OCT85** HCC:G3 Boiling Pt:B.P. Text:-22F,-30C Vapor Pres:4888 @ 25C

Vapor D

ensity:4.26 Spec Gravity:1.315 Solubility in Water:NEGLIGIBLE Appearance and Odor: CLEAR, COLORLESS LIQUEFIED GAS - SLIGHT ETHEREAL ODOR Percent Volatiles by Volume:100 Stability Indicator/Materials to Avoid:YES ALKALI OR ALKALINE EARTH METALS, POWDERED ALUMINUM, ZINC, BERYLLIUM, ETC. Stability Condition to Avoid: FIRE, TEMPERATURES ABOVE 125F Hazardous Decomposition Products: MAY FORM HYDROGEN FLUORIDE, HYDROGEN CHLO RIDE AND TRACES OF CARBONYL HALIDES. Waste Disposal Methods: FOR DISCHARGE OR DISPOSING OF WASTE MATERIAL, CONSULT LOCAL, STATE AND FEDERAL AUTHORITIES.

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